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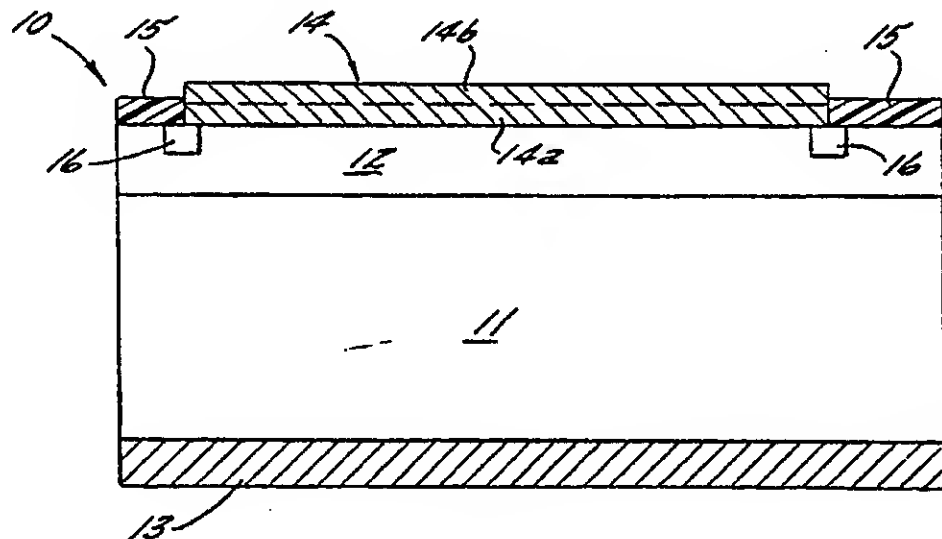
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(54) Silicon carbide Schottky diode and method of making same.

(57) A high performance silicon carbide Schottky contact (14) comprises a platinum containing contact on α -silicon carbide (11,12), specifically 6H- α silicon carbide. At least part (14a) of the platinum-containing contact may comprise platinum silicide which may be formed by annealing to convert at least part of

the platinum to platinum silicide. An ohmic contact (13) to the substrate (11) is also provided. A guard ring (16) or field plate may be provided. The Schottky contact exhibits lower forward resistance, lower reverse current and higher reverse breakdown voltage than heretofore available designs.



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EUROPEAN SEARCH REPORT

Application Number

EP 90 30 0796

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	APPLIED PHYSICS LETTERS. vol. 46, no. 8, April 1985, NEW YORK US pages 766 - 768; S.Yoshida et al.: "Schottky Barrier Diodes on 3C-SiC" * abstract *	1	H 01 L 29/91
A	SOLID STATE ELECTRONICS. vol. 20, no. 6, June 1977, OXFORD GB pages 499 - 506; A.Rusu et al.: "THE METAL-OVERLAP Laterally-Diffused (MOLD) SCHOTTKY DIODE." * figure 1 *	7-9	
P,A	JOURNAL OF APPLIED PHYSICS. vol. 65, no. 9, May 1989, NEW YORK US pages 3526 - 3530; N.A.Papanicolaou et al.: "Pt and PtSix Contacts on n-type beta-SiC" * abstract *	1-5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H 01 L
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		11 December 90	NILES N.P.E.
CATEGORY OF CITED DOCUMENTS		E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons	
X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category			